

Devonian  
of  
New Mexico  
1956

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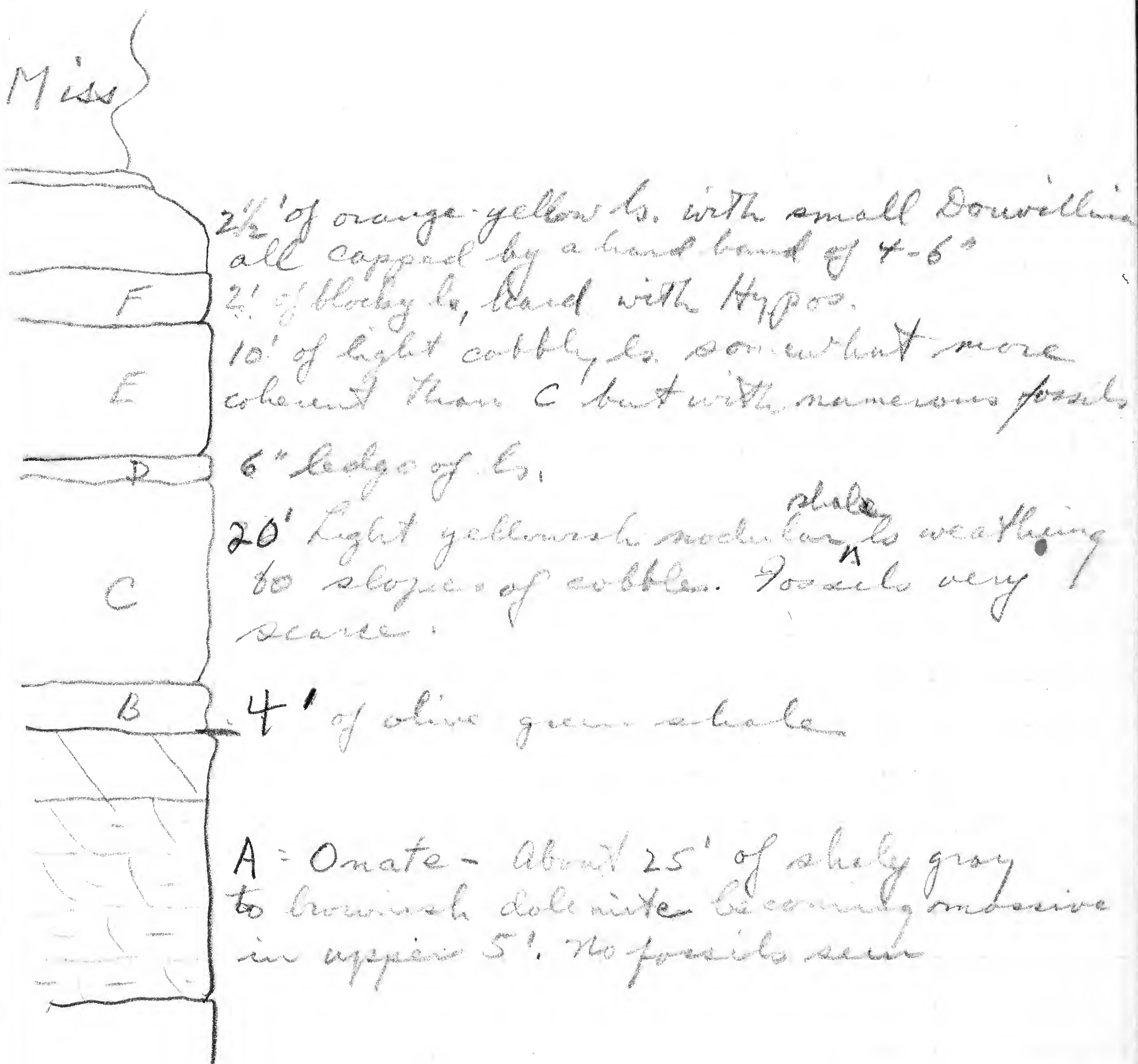


(9)

Sept. 16.  
Indian Wells Canyon

Total 39'

Miss





(10)

Sept 22

Section NW of Rineer Sec 1-185-3W.

The base of the section not clearly visible so lowest shale is uncertainly measured. The lowest beds are soft shale weathering pink or red, with large Schizophoria, Martinioid and Atrypa. This is overlain by 5 or 6' of thin bedded sandstone with conodonts. Over this are two shales aggregating nearly 100' consisting of dark gray shale below with dark olive shale. This is overlain by blocky dirty fine sandstone with Cyrtospira and Ambocoelia in the lower part. This ss is overlain by 10 or 15' of red sandstone with Pecten. Art thinks the red ss is this.

Section in Derry Hill.

No base known to section. Lowest beds are two or three bands of nodular ls. 3" thick separated by sh and having Ambocoelia. Overlain by 15'-20' of soft shale with Martinioid and large Rugosites. This is overlain by 20-30' of black & dark green gray sh. Over this is 8-10' of flatter, soft brown weathering gray ss. Followed 2' of shaly beds. Top is 9' of thin-bedded blue gray ss with fish fragments. Over this is 2' of cobbly green shale with Pennsylvanian fossils.



(11)

Sept. 23  
Mud Spring Mtns.

Penn.

L		Cobbles Pa - 3'
K	2-3'	Green gray shale
J	9'	Olive green shale
I	10'	Thomasiana nodular zone with short, wide <i>Atrypa</i> , <i>Newostrophia</i>
H	8'	Green shale
G	2'	hard cobbly band - <i>Newostrophia</i> , <i>Dorvilleina</i> , <i>Thomasiana</i>
F	15'	Green shale with sparse calc. cobbles.
E	7'	Green shale
D	14'	Orange yellow nodular ls and thin yellow shale. <i>Schiz.</i> , <i>Atrypa</i> , <i>Martini</i> about 3' below top
C	15-20'	Soft shale with gypsum, <i>Pugnoid</i> , <i>Atrypa</i> large light gray. <i>Sphaerospira</i> at about top.
B	7'	Shaly-weather ls with hard cobbly bands of ls. with <i>Ch. amosa</i> . Pink weathering gr. ls.
A	2 1/2 - 5'	Dolomite, red weathering, lower 1/2' fractured to small pieces foss.

if there is

Galley



(12)

- B - On the exposure of B two specimens of *Hypothyridina* were found loose. These seemed to be in situ in place but may have come from F-I. Bed B suggests Jolly and is Ambrosia beds of Derry.
- A - Poorly preserved brachiopods suggest *Leiorhynchus*.
- C - corresponds to the Pugnoides shale at Derry.
- D - The martinitoid comes from near the top, about 3' below, with *Sclerophoria* and the large *Atypas*.
- C and D may correspond to Altona in terms of New York. These beds seem to be confined to Mud Springs, Derry & Caballo Mts.
- Beds E - J correspond to Sly Gaps of San Andres Mts. as exhibited at Sly Gap & Rhodes Canyon.
- I - Cobbles at top appear to be same as cobbles of Penn. age of Derry Hills.



(13)

September 25  
Sacramento Mtns.  
Section in Deadman Canyon

cobbly Caballero

5'

black shale, layer of cobbles at top. 5'

10'

cobbly ls. 10'

2'

ls beds (3) top one 9", middle 3", bottom 4"  
with *Hypothyridina*, *Thomasina* = 2'

4'

shale 4'

5'

cobbly ls + shale 5' fossil *Thomasina*

4'

Dark shale 4'

5'

Shale with sparse cobbles, *Colmania* 5'

12-15'

Covered 12-15' dark shale, few cobbles

40'±

About 40', dark shaly ls at base  
O nate passing into shaly weathering  
and massive, fine-grained  
dolomite at top. Top 3' pinkish  
and hard. Fossils common  
6' below top. *Leiodontina*  
common in lower half.

Ord.

Total Percha 47'



(14)

Section of Cobblers  
Deadman Canyon

massive limestone

46'

Cobbly limestone, densely packed  
cobbles, cobbles peppered with  
crinoidal debris

5'

hard cobbly limestone forming a  
prominent ledge.

40'

Cobbly limestone, cobbles  
smooth, small productids,  
and small Spirifers

Sly  
Gap



15

## Type section Oñate

N side San Andres Canyon near  
lead mine,

15'

No fossils in these beds except *Martinia*  
I at base. Hard gray dol., fine grained  
weathering red brown - top band 4' solid  
bed.

12'

H - soft calc. shale with crinoid  
stems *Atrypa*, *Schizophoria* & large  
*Martinia* at top.

1'

G - hard ls with *Leptostrophia*

2'

F - shaly ls. crinoid stems

4'

E Hard brown ls in 2 massive ledges  
*Leptostrophia*

9'

D - Shaly weathering ls with *Cystodictya*, *Atrypa*  
*Leptostrophia*, *Productella*, *Schizophoria*

13'

C ash gray shale culminating in a 2' hard  
band, *Leptostrophia*, *C. aurora*, *Leiorhynchus*  
*Cystodictya*

8'

B Hard dark blocky ls with interbedded  
dark shale big *Leiorhynchus* common

25'

A - chunky light ash gray weathering  
ls in beds up to 4" thick  
*C. aurora*, *Echinocoelia* near  
top.



(16)

Miss

# Ash Canyon (North)

Sept. 28,

32'

Green shale

Center NE 1/4 20-145-4E  
with *Rhipidomella*

48' green sh with small *Camerozoechia*

42' band with *Spinifer*

60'

20' - 3-forks fauna

Entire sequence  
consists of shale, green,  
red and dark gray to  
black.

Post - Contadero

10'

Hard cobbly blue ls with thin band  
red sh 3' below top. Large *Camerozoechia*

10'

Hard blue cobbly ls. With 2' cobbly sh  
at base

Contadero

7'

Red crumbly shale.

35'

Cobbly shale with Elly Gap fauna

7 bands of cobbly hard ls. separated  
by sh. 2 conspicuous bands 8-9" thick  
at about 20 & 25'; these thinner  
bands to top.

Gap  
Elly

12'

Soft shale with thin limy lenses near top

8'

Shaly with bands of hard silty dol ls. 4"-6" thick. *Spinifer*

12'

Mostly covered but indications of weathered  
gray silty shale

3'

Dark shaly ls at base becoming reddish weathering dol  
at top.

2'

Covered

"Montana"



(17)

# Rhodes Pass

Section about 1 mile west  
of entrance to Rhodes Pass and  
about 1/2 mile N of road  
Sept. 30, 1956

P - Rhodes Canyon  
L - O - Contadero  
E - K - Sky Gap  
A - D - Oñate

Mississippi

Green gray shale containing thin  
platy sandstones up to 1" thick.

P

62'

Clew Nigridina

Rhodes Canyon

O

6' ss with, yellow gray to pink, with  
phosphatic pebbles in a band 1' thick at base

N

9' hard, dark, nodular limestone  
congl.

M

4' shaly and limy beds with Ambocoelia  
Spinatrypa, Douvillina



(18)

See page above

M

lying flat beds with fossils

L

36' Shale, dark gray, alternating with layers of ss, at base 2 layers 2' with 5" pink gray shale scattered above. About 20 layers of platy ss.

Confidens

Sly Gap

K

10' shale red at bottom becoming red-gray at top.

J

7' hard nodular ls. with Elythra, Pachyphyllum big Schizophoria.

Nodular shale abounding in Atrypa 35' and the Sly Gap fauna.

I

H

6' with 6" hard band, yellowish nodular shale

G

4' dark gray & black sh with 6" silty band at top

band of algae 4"

F

10' gray, light, <sup>nodular</sup> shale somewhat calcareous large Schizophoria, large Atrypa, columnar in a hard gray to red layers 1/8" thick.

E

7' Gray dark shale with Megac. capped by brownish siltstone 1 1/2'.

D

4 1/2' Gray shale with 3' layers (1 1/2') siltstone (brown)

C

3 1/2' gray sh 1', siltstone 5", shale 1', siltstone 1'

B

2-3' Reddish dol. massive bryozoan

A

Silty, thin bedded dol with shaly fracture. To south consists of about 30' of silty, flat bedded dolomite with chert & a few fossils.



(19)

October 1

## Johnson Park Canyon

Section thin and composed mostly of sandstone. In lowest 12-5' *Tropidoleptus*, snails, tentaculites common. Snails & Tentacs. often in chert lenses in a thin bedded, red-brown sandstone. *Tropidoleptus* debris often wrapped around or on surface of chert lens.

About 10' above base is a hard sandy bed with *Leptostrophia* and *Schizophoria*. This may be top of Onate. *Spirifer* occur in lenses below the *Leptostrophia* in 5-10' above base. The *Spirifer* are commonest about 1-2' below a thin bedded ss about 5' above. A second *Spirifer* zone occurs about 2' above this ss.

Just above the *Leptostrophia* bed comes punky lumpy ss with *Mcqueen*. This is about 25' thick. Then 16' mostly covered but with lumpy sandstone. *Ambocoelia* came about 15' below top. The top beds are soft green shale with small crinoid segments.

25

5'

2-5'



(20)

Sacramento  
October 3

Caballero

First canyon. N of Pig Canyon

Cameroecchia

Aulacella in  
top foot

1' hard yellow limestone  
6 1/2' yellow sh with 6" band of siltstone (Big mouth  
Atrypa)  
6' fine cobbly limestone few fossils  
more bluish than below large  
smoothish Atrypa

3' Cobbley gray limestone, bluish, few fossils (Boiled bands)

1' yellow shale with smoothish Atrypa

4' hard cobbly, few fossils

2' yellow shale

4' black shale

Small Duvallina in top 2 feet

10' Cobbley ls separated by yellow shale

Hypothyridina about 6' below top. Many  
algae-like nodules.

1' black shale

3' Dark gray shale

20' Mostly greenish yellow shale  
with scattered nodules and scattered thin  
bands of dark shale - No fossils seen

Onate



(21)

Orkney  
15th Canyon N of Pig Canyon

Hard reddish massive dolomite.  
8' No fossils, Numerous horizontal  
worm-tubes.

2' soft shaly rock

4' Massive hard ledge of dolomitic  
rock.

16' Shaly, weathering, ash gray somewhat  
leached limestone with *Leiorhynchus*,  
*Spinifer*, *Rhipidomella*. Numerous  
vertical furrows scattered in  
upper half.

10' Dark leached shales passing into  
dark lumpy rock with *Leiorhynchus*

Covered 5'±



(22)

Caballero

1st Canyon N of Pig Canyon

3' Fairly hard blue ls.

Cobbly ls., the cobbles separated  
by soft or hard calcareous  
shale.

5 1/2'

3' hard nodular ls.

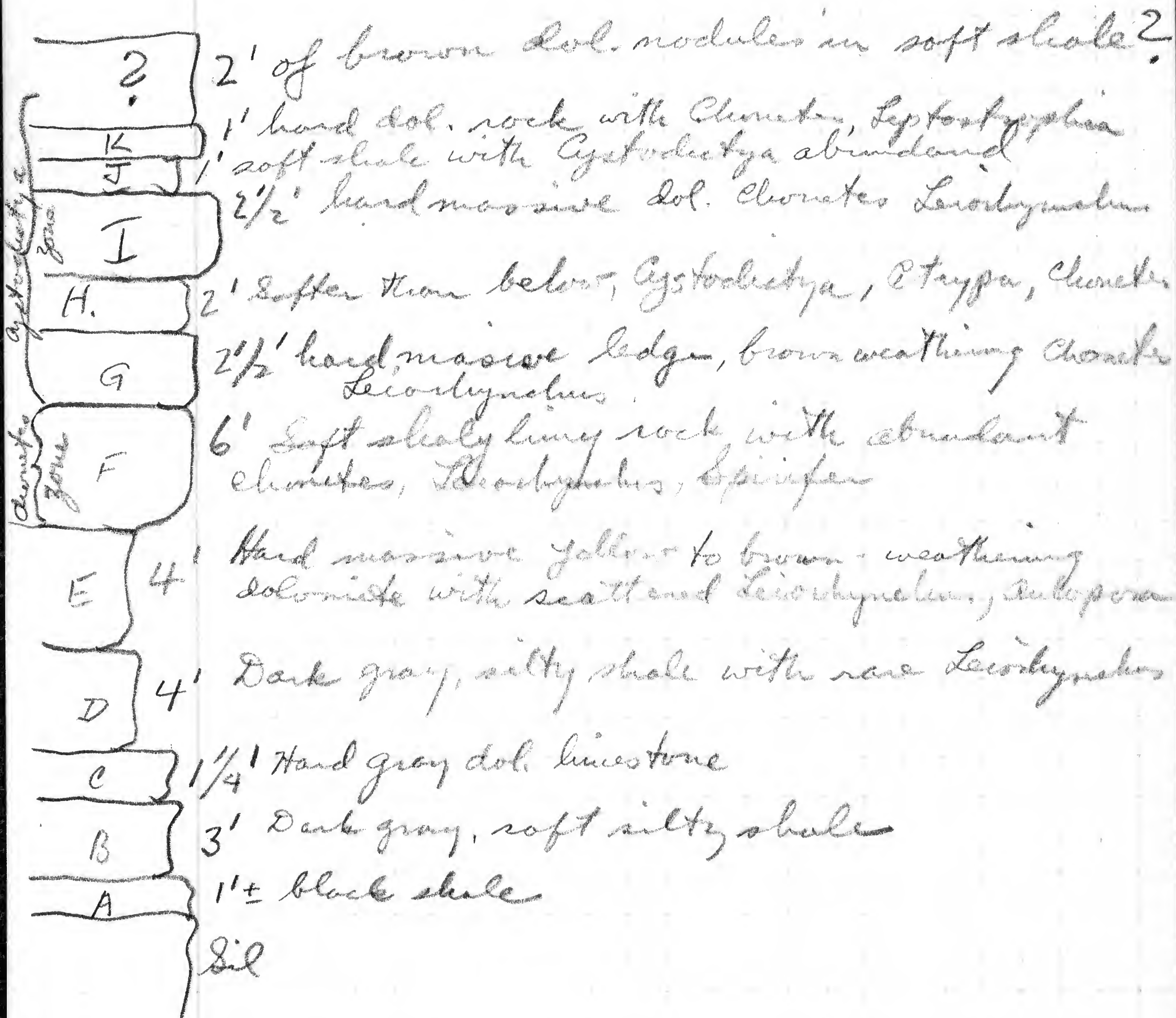
4' Nodular limestone

Sly Gap



23

Oct. 5  
Alamo Peak  
Orate





(24)

# Sly Gap - Alamo Peak

Total 29'

Caballero

1 1/2' shale, soft dark

1 1/2' limestone, hard, thick, algal. 3 layers 6" at bottom, 4" and 6"

2" shale

8" limestone in 3 layers, *Thomasina*  
*Hypothyridina* in lowest bed

25' greenish shale, fine and friable  
in thin flakes. Cobbly, cobbles few  
in lower 10' becoming more abundant  
above

ooooo

2

Phosphate nodules with large flat unfoss. 2  
dark shale with large flat unfoss. 2  
nodules. Also long rod-like "fossils" may  
be *Onate* as nodules weather like *Onate*

*Onate*



25

Oct. 6  
Dog Canyon  
Ariz.

Caballero

6" black shale with cobbles like Caballero, fish remains, phosphate nodules.

8-10' covered

2'

9"

9"

3'

1'

1/2'

1'

7'

Hard resistant in 2 beds, upper one with black worm tubes, the surface of the lower one pitted fragments of fish, phosphate nodules

shaly weathering

Hard dol

Shaly weathering, big Schizophoria, Atrypa

Hard red weathering dol, resistant

Shaly weathering

Hard red-weathering dolomite Atrypa, Leptostrophia, Productella

Hard shaly weathering dolomite, light gray

18'

Dolomite, shaly weathering at base becoming harder and resistant at top. Atrypa, Cyrtodictya scattered & rare

3'

3'

6'

Shaly weathering dol with Leiorhynchus

Covered

Porphyry sill

Fusselman

No sly Gap present



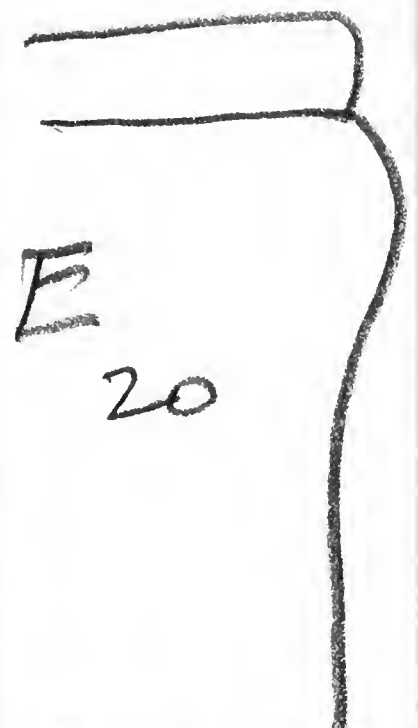
(26)

Oct. 7  
Onate

Alamo Canyon  
2 1/2 miles up from mouth  
Onate

Reddish dolomite 1'

1'



Interbedded thin dolomite  
and dark shale with *Atrypa*  
and *fucoids*

20'



Dol. shale with hard band  
in top 2' and another 3' below top  
band and one 4' below top. *Atrypa*  
*Leiorhynchus* + *Chonetes* 10'  
Dolomite massive with *Leiorhynchus* 3'

10'

3'



Black shale with 2 dol beds of 4"  
2' and 4' below top.

5'



Ss with chert and small pebbles 1'

1'

40'

Fusselman



27

Alamo Canyon

Caballero

- M 2" black sh., phosphate pebble
- L 3' green shale with 1/2' x-bedded as in middle
- K 2' Hard silty limestone, greenish weathering red brown, big Atrypa. 2'
- J 8' gray cobbly shale, big Atrypa
- I 3' light gray limestone, cobbly
- H 3' black shale
- G 1' gray shale
- F 4' Cobbly limestone, hard
- E 1' green shale
- D 1' Consisting of 3 thin beds ls, top about 6" middle 2-3", bottom 1-2", with shale in between Pugnoides, Hypothyridina, Homotrypa
- C 3' green shale
- B 3' cobbly ls. with Neurotopia, Hypothyridina
- A 22' of greenish crumbly shale with several thin layers of dark gray to black shale and layers of cobbles  
Manticoceras about 6' below top in a cobbly bed.

Oñate

Total 54



(28)

In a side gully bed L is missing  
and limestone has a one-inch  
sand with corals on it just  
under 6" of black shale with  
phosphate



29

# Mule Canyon Oct. 8

Sill 514

covered 3'

shale green 2'

shale & cobbles 1'

green sh 1'

limestone 3 bands  $\left\{ \begin{matrix} 7'' \\ 2'' \\ 2'' \end{matrix} \right\}$  Hippo bed 1'

shale greenish & dark 4'

cobbles 3'

Greenish shale with few thin  
8' cobble bands and dark sh bands

cobbles 6"

2'

cobbles 6"

3'

6" cobble

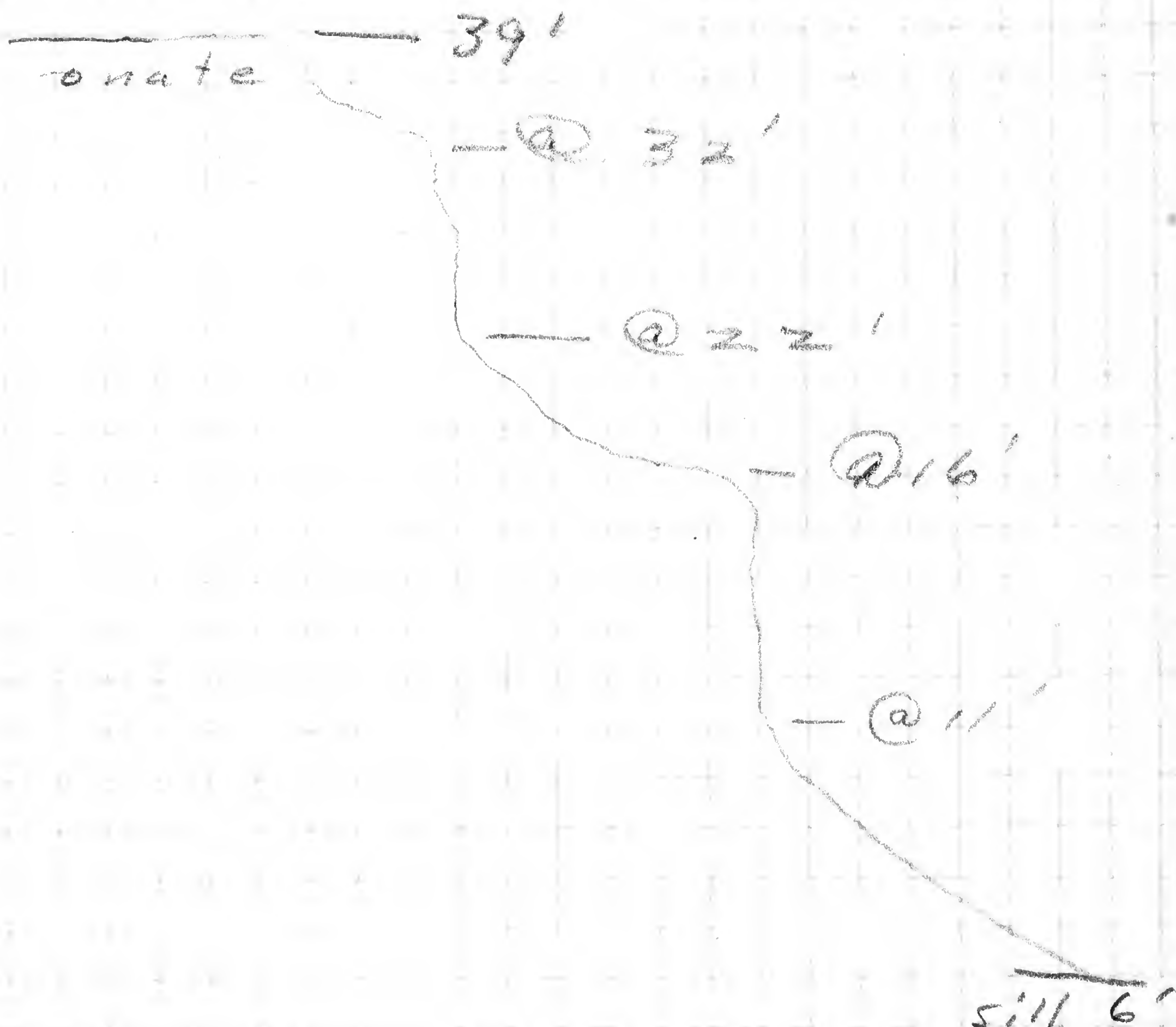
5' Greenish crumbly shale.

Onate 39'  $\left\{ \begin{matrix} Chonetes \\ Leptopneustes \end{matrix} \right\}$



(20)

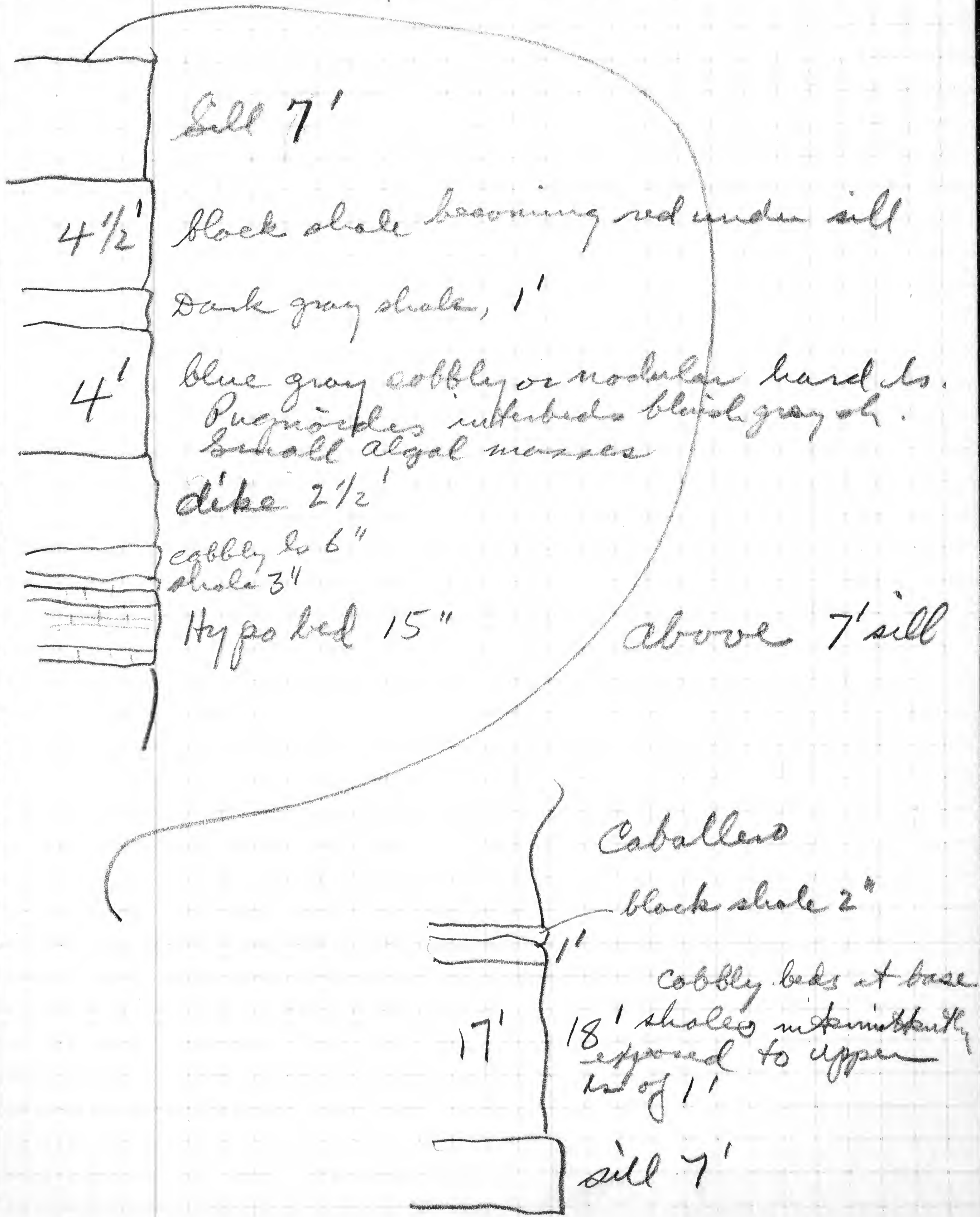
Mule Canyon  
onate





(31)

Mule Canyon  
Dully to north.





(32)

Mule Canyon  
Caballero

48' cobbly ls.

2 1/2'

9' cobbly ls.

Sly Gap



(33)

5 mi. E of Vinton  
October 9.

Cumulated from

Black  
shale  
60-70'

4½' black limestone weathering to  
orange brown color

20-25' Thin bedded shaly to platy  
limestone and dark gray to black  
shale. Solider bands of 2-3" thick  
often with fossils *Chonetes*, *Styliolina*,  
*Leiorhynchus*, *Schizophoria*, *Orthis*  
Bottom with black chert lenses.

Gray dolomite with chert lenses,  
thick at top. Fossils 2' below top.



Collected Larches

1970

1974